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From: David Farber ("FARBER@EFF.ORG")
To: interesting-people@eff.org
Date: Thursday, December 8, 1994 6:43 pm
Subject: threats to educational uses of wireless networks (fwd) (SMTP Id#: 1578)

Received: from gatekeeper.fcc.gov (internet.fcc.gov [165.135.0.254]) by spectrum.fcc.gov (8.6.5/8.6.5) with SMTP id SAA26941 for <mmarcus@fcc.gov>; Thu, 8 Dec 1994 18:43:25 -0500
From-WP: farber@eff.org
To-WP: <mmarcus@fcc.gov>
Received: by gatekeeper.fcc.gov (5.65/DEC-Ultrix/4.3)
id AA23473; Thu, 8 Dec 1994 18:47:17 -0500
Received: from eff.org(192.77.172.3) by gatekeeper via smap (V1.0mjr)
id sma023465; Thu Dec 8 18:46:28 1994
Received: (from daemon@localhost) by eff.org (8.6.9/8.6.6) id RAA20825 for interesting-people-exploder; Thu, 8 Dec 1994 17:40:27 -0500
Posted-Date: Thu, 8 Dec 1994 17:39:46 -0500
X-Sender: farber@linc.cis.upenn.edu
Message-Id: <ab0d3b5d5b021004ab98@[130.91.88.102]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Thu, 8 Dec 1994 17:39:48 -0500
From: farber@central.cis.upenn.edu (David Farber)
Subject: threats to educational uses of wireless networks (fwd)
Precedence: list
To: interesting-people@eff.org (interesting-people mailing list)
X-Proccessed-By: mail2list

Date: Wed, 7 Dec 1994 14:24:12 -0800
From: Phil Agre <pagre@weber.ucsd.edu>
Message-Id: <199412072224.OAA02174@weber.ucsd.edu>
To: rre@weber.ucsd.edu
Subject: threats to educational uses of wireless networks

The enclosed message comes from my friend Steven Hodas, who is a consultant with the NASA K-12 Internet Initiative but is writing purely as an individual citizen. The issue concerns industry-driven US regulatory threats the use of low-power radio communications for local community networking. Regular readers of RRE will recall this technique being promoted at length by Dave Hughes in a message called "Wireless and American Dreams", which web-crawlers can get from the following URL:

http://www.utopia.com/mailings/rre/Wireless.and.American.Dreams.html

This is an issue you can act on by getting in touch with the FCC. You may recall that the technology that's causing the trouble here, namely wireless tracking of road vehicles, is part of the Intelligent Transportation Systems program whose privacy aspects are an ongoing matter of very serious concern. This issue would provide a good occasion to let the public know about these technologies and their potential costs. Letters to the editor can accomplish remarkable things in this regard, as can brief articles for publications for educators and other relevant professionals.

Phil

Encl:

Date: Wed, 30 Nov 1994 21:34:42 -0500 (EST)
From: Steven Hodas <hodas@lupine.nsi.nasa.gov>
To: pagre@ucsd.edu
Subject: Another facet of Vehicle tracking

Hi Phil-

Today I attended a briefing on a typically internecine Washington squabble,

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but one that might be of interest to you, as it bears (obliquely) on the policy decisons being made that relate to intelligent highway systems and directly on the dispersal of educational technology to underserved areas.

As you might guess, wireless networks (wide and local area) have an important role to play in helping to connect schools where hard-wiring is impractical, either because the age and/or condition of the building precludes it (too expensive, stirs up asbestos, etc.) or where the schools are geographically dispersed or far from a POP, as in rural areas. There are a bunch of companies that offer wireless networking products and services that are resonably affordable, even by schools and, of course, the market is growing. A number of the proposals I looked at for NSF and NTIA grants empahsized wireless, and many of them were good.

All these wireless spread-spectrum connections operate in the 900mhz spectrum courtesy of Part 15, an FCC regulation which exempts the devices an users from licensing reqwuirements provided the boxes met two conditions: they must create no interference, and they must tolerate any interference that happens to come along. Such is the price of license freedom. Consequently, Part 15 devices are exceptionally good neighbors: necessarily, they must all get along.

Well, it seems that the suppliers of transceivers used for Vehicle Location Systems and Automatic Vehicle Monitoring want to occupy the same portion of the spectrum. It also seems that, despite being up to one hundred times as powerful as the dinky little wireless modems they can brook not the slightest bit of interference. Further, these VLS boxes are licensed, albeit at the lowest level possible, and hence do have the right to kick the wireless modems off the spectrum at the first sign of trouble. So, for instance, you might be invest in a wireless modem setup for your district, and run it with no problems. suddenly, a VLS box is mounted on a roof somewhere,and receives interference from your fifth graders' wireless Web server. The VLS system owner can have the FCC shut your network down (That'll play well on the local news, don't you think?)

But the VLS system owners don't want to worry about that possibility. Instead, they've asked the FCC to open a rule-making (a fast-track process with very minimal public participation) to close the spectrum to Part 15 devices right now. The FCC is amenable to this for two reasons: license-free spectrum means no license revenues (although it's not clear how valuable these licenses would be, since they're non-exclusive); and traditionally license holders have been able to have their way against unlicensed users/providers. The decsion will be made in the very near future, perhaps just a few weeks. BTW, the company instigating this action is Airtouch, nee PacTel. Speculation is that the real reson they want the spectrum cleared is to use it as a cheap way of building a PCS network.

The upshot, though, is that the decisions made on spectrum allocation which favor VLS systems will cripple the wireless access model for education.

Regards,

Steven